## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPLICANTS:** 

Goyal

**DOCKET NO:** 

1077

**SERIAL NO.:** 

**ART UNIT:** 

FILED:

**EXAMINER:** 

TITLE:

**Semiconductor Films on Flexible Substrates** 

## **INFORMATION DISCLOSURE STATEMENT under 37 CFR 1.56 and 1.97**

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to applicant in order to comply with applicant's duty of disclosure pursuant to 37 C.F.R. § 1.56. A copy of each document is being submitted herewith to comply with the provisions of 37 C.F.R. §§ 1.97 and 1.98.

Applicant presents these references that the Patent Office may determine any relevancy thereof to the presently claimed invention.

Applicant respectfully requests that the references be expressly considered during the prosecution of the subject application and made of record therein and appear among the "references cited" on any patent to issue therefrom.

Applicant also requests that an initialed copy of Form PTO-1449 be returned in accordance with MPEP Section 609.

Respectfully submitted,

oseph A. Marasco, Agent for Applicants

Reg. No. 32,798

UT-Battelle, LLC

P.O. Box 2008 MS 6258

Oak Ridge, TN 37831

(865) 574-4178

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

^			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	Number-Kind Code <sup>2 (F known)</sup>	04 14 1000	Coval et al	, iganest ppear
		<sup>US-</sup> 5,739,086	04-14-1998	Goyal, et al.	
	2	<sup>US-</sup> 5,741,377	04-21-1998	Goyal, et al.	
	3	<sup>US-</sup> 5,898,020	04-27-1999	Goyal, et al.	
_	4	<sup>US-</sup> 5,958,599	09-28-1999	Goyal, et al.	
	5	<sup>US-</sup> 5,964,966	10-12-1999	Goyal, et al.	
	6	US- 5,968,877	10-19-1999	Budai, et al.	
	7	<sup>US-</sup> 5,972,847	10-26-1999	Feenstra, et al.	
	8	<sup>US-</sup> 6,077,344	06-20-2000	Shoup, et al.	
	9	<sup>US-</sup> 6,106,615	08-22-2000	Goyal, et al.	
	10	<sup>US-</sup> 6,114,287	09-05-2000	Lee, et al.	
	11	<sup>US-</sup> 6,150,034	11-21-2000	Paranthaman, et al.	
	12	<sup>US-</sup> 6,156,376	12-05-2000	Paranthaman, et al.	
	13	<sup>US-</sup> 6,159,610	12-12-2000	Paranthaman, et al.	
	14	<sup>US-</sup> 6,180,570	01-31-2001	Goyal	
	15	US- 6,235,402	05-22-2001	Shoup, et al.	
	16	<sup>US-</sup> 6,256,521	07-03-2001	Lee, et al.	
	17	<sup>US-</sup> 6,261,704	07-17-2001	Goyal, et al.	
	18	<sup>US-</sup> 6,270,908	08-07-2001	Williams, et al.	
	19	<sup>US-</sup> 6,331,199	12-18-2001	Goyal, et al.	

		FORE	IGN PATENT DOCU	MENTS	· · · · · · · · · · · · · · · · · · ·	
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	1
						L
						L
						L
					1	f

Examiner	Date	-
Signature	Considered	

\*EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO	Complete if Known			
	Application Number			
INFORMATION DISCLOSURE	Filing Date			
INFORMATION DISCLOSURE	First Named Inventor	Goyal		
STATEMENT BY APPLICANT	Art Unit			
(Use as many sheets as necessary)	Examiner Name			
Sheet 2 of 4	Attorney Docket Number	1077		

			U. S. PATEN	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2 (f known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevan Figures Appear
	20	US- C 075 700	04.00.0000	Covel	3
	ļ	<sup>US-</sup> 6,375,768	04-23-2002	Goyal	
	21	<sup>US-</sup> 6,399,154	06-04-2002	Williams, et al.	
	22	<sup>US-</sup> 6,440,211	08-27-2002	Beach, et al.	
	23	<sup>US-</sup> 6,447,714	09-10-2002	Goyal, et al.	
	24	<sup>US-</sup> 6,451,450	09-17-2002	Goyal, et al.	
	25	<sup>US-</sup> 6,468,591	10-22-2002	Paranthaman, et al.	
	26	<sup>US-</sup> 6,486,100	11-26-2002	Lee, at al.	
	27	<sup>US-</sup> 6,599,346	07-29-2003	Goyal, et al.	
	28	<sup>US-</sup> 6,602,313	08-05-2003	Goyal, et al.	
	29	<sup>US-</sup> 6,607,838	08-19-2003	Goyal, et al.	
	30	<sup>US-</sup> 6,607,839	08-19-2003	Goyal, et al.	
	31	<sup>US-</sup> 6,610,413	08-26-2003	Goyal, et al.	
	32	<sup>US-</sup> 6,610,414	08-26-2003	Goyal, et al.	
	33	<sup>US-</sup> 6,617,283	09-09-2003	Paranthaman, et al.	
	34	<sup>US-</sup> 6,635,097	10-21-2003	Goyal, et al.	
	35	<sup>US-</sup> 6,645,313	11-11-2003	Goyal, et al.	
	36	<sup>US-</sup> 6,663,976	12-16-2003	Beach, et al.	
	37	<sup>US-</sup> 6,670,308	12-30-2003	Goyal	
	38	<sup>US-</sup> 6,455,166	09-24-2002	Truchan	

		FOREIG	N PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code <sup>3 -</sup> Number <sup>4 -</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T⁵
		<u>-</u>			,	
•						

Examiner	,	Date	
Signature		Considere	1
-	•	1	I

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

1077

Sheet 3

Attorney Docket Number

			U. S. PATEN	T DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	ļ	Number-Kind Code <sup>2 (# known)</sup>			rigures Appear
	39	<sup>US-</sup> 3,316,391	11-13-2001	Doi	
	40	<sup>US-</sup> 20030143438	07-31-2003	Norton, et al.	(Published app.)
	41	<sup>US-</sup> 10/189,678		Goyal	(Filed 07-03-2002)
		US-			
-		US-			
		US-			

		FOREIG	N PATENT DOCU	IMENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	<b>-</b> -6
		Country Code <sup>3 -</sup> Number <sup>4 -</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	
	<del>-</del>					

Examiner	Date	
Signature	Considered	
-		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  INFORMATION DISCLOSURE								Complete if Known	$\overline{}$
							Application Number		
INF	INFORMATION DISCLOSURE STATEMENT BY APPLICANT					URE	Filing Date		
STA						ANT	First Named Inventor	Goyal	
	(Use as many sheets as necessary)				Art Unit				
					Examiner Name				
Sheet	4		of 4				Attorney Docket Number	1077	
			-						
					NO	ON PAT	ENT LITERATURE DOC	CUMENTS	
Exami Initials		Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title the item (book, magazine, journal, serial, symposium, can number(s), publisher, city and/or court					talog, etc.), date, page(s), volume-issue	T <sup>2</sup>
		42	M. SCHRECK, et al., "Diamond nucleation on iridium buffer layers and subsequent textured growth: A route for the realization of single-crystal diamond films",						
				January 8, 2001, Pages 192-194, Vol. 78, No. 2, Applied Physics Letters, Melville, NY					
·									
	•								

<u></u>		_
Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.